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Public perception to herbal therapy for the management of malaria in rural communities of Khana Local Government Area, Rivers State, Nigeria

LeBari Barine Gboeloh
Department of Biology, Ignatius Ajuru University of Education, Port Harcourt, Nigeria
lgboeloh@yahoo.com

ABSTRACT:
Herbal therapy involves the use of naturally occurring plant parts to treat ailments. It is an integral part of traditional medicine in Africa. Public perception to herbal therapy for the management of malaria in rural communities of Khana Local Government Area, Rivers State was examined. A cross sectional survey technique was used and out of 500 questionnaires distributed, only 316 (63.2%) was returned. The results indicated that 85.4% ($P<0.05$) of the respondents have used herbs as medicine, of which 98.7% ($P<0.05$) used it to treat malaria, 41.8% agreed to the effectiveness of herbs for the treatment of malaria and only 0.31% claimed it is not effective. Majority (78.2%) agreed to the regular availability and affordability of herbal medicine and 73.7% ($P<0.05$) claimed that it is safe to use herbs for malaria treatment. Although 53.2% of respondents claimed to get information about herbal medicine from family members, 94.9% and 95.3% advocated for its regulation and integration into the primary healthcare system respectively. Although the study revealed good knowledge of herbal therapy in the study area, there is need to educate the people on proper use of herbal therapy especially the safety. They should also be educated on appropriate home management strategy for malaria since majority engages in self-treatment.
Key Words: Perception, Herbal Therapy, Malaria, Rural communities, Khana.

INTRODUCTION

Herbal therapy, also called traditional herbal medicine refers to the use of naturally occurring plant parts or plant derived substances to treat ailments. Records indicates that throughout human history, plants have always been the fundamental basis for the management of many diseases [1] [2] [3] and it is still part of modern medicine as many bioactive compounds from plants are used in the synthesis of modern drugs[4].

In Africa, herbs remains an integral part of our traditional healthcare system and although many herbs used in this regard have not been scientifically assessed [5], more than 80% of Africans still depend on herbs for the treatment of common diseases[6].

The plant parts are used singly or in combination with other medicinal plants that confer synergistic effects, prepared as infusions in hot water, decoction in cold water, concoction with food and as tinctures with alcohol and administered orally, topically, by inhalation of vapour and by steam bath [7].

Similarly, herbal medicine is very important in the treatment of malaria among Africans. It is the source of artemisinin and quinine derivatives for modern antiplasmodial drugs [4].

The global market value for herbal products is estimated to be US$60 billion [6] and following increased funding of research into herbal medicine by world health organization, agencies and countries including China, Nigeria and USA, it is hopeful that the drug resistant strain of malaria parasite and other diseases will soon be addressed [6] [8].

In view of the reported global increase in the use of complementary and alternative medicine [9] [10] [11], there has been several studies to investigate the perception of modern medical doctors to this non-conventional therapy [12] [13] [14] [8] [16] [17] but there is no available record of the public perception to herbal therapy for malaria in Khana Local Government Area, Rivers State. Therefore, this study is aimed at the assessment of public perception to herbal therapy for malaria treatment in rural communities of Khana Local Government area, Rivers State, Nigeria.

MATERIALS AND METHODS

Study Area: The study was carried out in Khana Local Government Area, Rivers State, Nigeria. The Local Government Area occupies an area of 560 square kilometres and lies in the Niger Delta within latitude $4^{0}42^{1}$NE and longitude $8^{0}21^{1}$NE. It has a population of about 294,217 as at 2006[18]. Large

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part of the population are subsistent farmers and traders living in thatch houses in a hydrocarbon polluted environment [18]. The Local Government Area is politically segmented into four major regions - Nyo-Khana, Ken-Khana, Babbe and Bori Urban. Besides Bori (Headquarters) with an urban flavour, peripheral towns around Bori and other communities in the Local Government Area are rural in very sense of it. These communities including Bori town lack basic social amenities and healthcare facilities. The only observable and functional healthcare facility in the area is the Bori general hospital.

Sampling Area

Sixteen communities (four from each geopolitical segmentation) within the local government area were randomly selected for this study. The communities included Gbene Nyobe-Beeri, Sogho, Taabaa and Lueku (Nyokhana district), Kpea, Bane, Kono and Wiiyakara (Ken Khana district), Luawii, Kaa, Betem and Gwara (Babbe district), Zaakpon, Kaani, Nortem and Bo-ue (Bori Urban).

Sampling Techniques

A cross sectional survey technique was used to obtain demographic information and malaria treatment seeking behaviour including perception to herbalism by the study population. The study was conducted between December, 2015 and July, 2016.

Ethical Approval

Ethical authorisation for this study was approved by the Ethics Committee, Ignatius Ajuru University of Education, Port Harcourt, Rivers State, Nigeria.

Data Analysis

Data obtained were analysed using SPSS version 17.0 at 95% significance level. Chi square was used to analyse differences between variables.

RESULTS

A total of 500 self-structured questionnaires were randomly distributed among residence of the sampled communities, out of which 316 questionnaires were answered and returned. Demographic analysis of the respondents indicated that the age group of 36-45years had the highest response (32.3%), followed by the age group of 46-55years (29.4%) while respondents within 56years and above have the lowest response (9.8%). The results also showed that 63.6% of the respondents were male and 36.4% were females. Most of the respondents were farmers (38.0%) and traders (37.7%) while 13.3%, 5.0%, 3.2% and 2.8% were students, herbalists, self-employed and civil servants respectively. Again, majority of the respondents (54.1%) had no formal education, 38.6% had secondary education, while only 13.3% have attended a tertiary institution (Table 1).

The results also showed that out of the 316 respondents, a statistically significant ($P<0.05$) number 270 (85.4%) claimed to have used herbs as medicine while 47.4% , 37.9% and 3.2% agreed to have used it within the last one month, last six months and within the last one year respectively (Table 2). The most commonly treated infection/ailment with herbs as reported by the respondents included malaria 312(98.7%), followed by bone fracture 51(16.1%), arthritis 20(6.3%) and diarrhoea 11(3.5%) (Table 2). The preferred sources of care/ treatment seeking behaviour of respondents for malaria are presented in table 3.
The use of orthodox drugs obtained from chemist was the commonest source of treatment 140(44.5%), followed by self-medication with traditional/herbal medicine 102(32.4%), visit to clinic/hospital 24(7.6%) and visit to herbalists 21(6.6%).

The use of traditional (herbal) medicine in the treatment of malaria was rated very good by 132(41.8%) of the respondents while only 1(0.31%) perceived that herbal therapy was bad. Table 3 also showed that 189(59.8%) resulted to using herbs only when they have malaria bout, 39(12.3%) used it when there was no money to buy modern medicine and 81(25.6%) used it when modern medicine cannot cure the malaria bout. Only 7(2.3%) combine modern medicine with herbal treatment of malaria.

Most of the respondents 247 (78.2%) agreed that herbal medicine was very cheap while 233(73.7%) attested to the safety of herbal medicine. 50(15.8%) claimed not to know about the safety or otherwise of traditional medicine while 21(6.6%) agreed that traditional medicine was not safe. Similarly, 123(38.9%) believed that the benefits of using herbs in the treatment of malaria outweighed the risks while 140(44.3%) of respondents agreed that there is no risk involved. Majority of the respondents 300 (94.9%) also agreed that traditional medicine should be integrated into conventional primary healthcare system, and 301(95.3%) agreed that traditional medicine should be regulated (Table 4).

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Table 1: Demographic characteristics of respondents

Characteristics	No. of Respondents (%)
Age	
15- 25	38 (12.0)
26- 35	52 (16.5)
36- 45	102 (32.3)
46- 55	93 (29.4)
56- Above	31 (9.8)
Sex	
Male	201 (63.6)
Female	115 (36.4)
Level of education	
Primary	2 (0.6)*
Secondary	122 (38.4) *
Tertiary	42 (13.3) *
None	171(171) *
Occupation	
Self- employed	10(3.2)
Student	42(13.3)
Civil servant	9(2.8)
Farming	120(38.0)
Trading/Business	119 (37.7)
Herbalist	16(5.0)

* Percentage completely surpass 100% because of multiple answers

Table 2: Perception to use of herbal (traditional) medicine to treat malaria (n=316)

Variables	No. of respondents (%)*
Ever use herbs as medicine?	
Yes	270(85.4)
No	46(14.6)
When last did you use traditional medicine?	
In the last 1month	178 (56.3)
Between 1 and 6 months ago	120 (37.9)
Between 6 months and a year ago	7 (2.2)
Between 1 and 2 years ago	10 (3.2)
Between 2 and 5 years ago	1 (0.3)
More than 5 years ago	0 (0.0)
Sickness treated with herbs	
Arthritis/Pain	20 (6.3)
Rheumatism	0 (0)
Malaria	312 (98.7)
Diarrhoea	11 (3.5)
STIs/HIV/AIDS	0 (0)
Mental illness	7 (2.2)
Pile/Boil	32 (10.1)
Bone fracture	51 (16.1)
Others	21(6.6)

* Percentage completely surpass 100% because of multiple answers

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Table 3: Treatment seeking behaviour for malaria (n=316)

Variables	No. of Respondents (%)
Visit the hospital/clinics/health centre	24 (7.6)
Self-medication with traditional medicine/herbs	102 (32.3)
Visit to herbalists	21(6.6)
Self-medication with left over orthodox medicine at home	10 (3.2)
Use orthodox antimalarial drugs bought from the chemist	140(44.3)
Effectiveness of traditional medicines/herbs to treat malaria	
Good	112(35.4)
Very good	132 (41.8)
Bad	1(0.31)
Very bad	0(00)
Moderate	71(22.5)
Frequency of the use of herbs to treat malaria	
When I have malaria	189(59.8)
When there is no money to buy orthodox medicine	39(12.3)
When orthodox cannot cure the malaria	81(25.6)
Very cheap	247(78.2)
I combine it with orthodox medicine	7(2.3)
Cost of traditional medicine/ herb for malaria treatment	
Moderately expensive	50(15.8)
Very expensive	19 (6.0)

TABLE 4: Treatment seeking behaviour for malaria (n=316)

Variables	No. of Respondents (%)
Safety of traditional medicine/herb for treatment of malaria	
Very safe	233(73.7)
Fairly safe	12(3.9)
Not safe at all	21(6.6)
I don't know	50(15.8)
Perception about the use of traditional medicine/herb to treat malaria.	
The benefits outweighed the risks	123(38.9)
The benefits and risks are about the same	13(2.8)
There are no risks involved	140(44.3)
There are no benefits involved	20 (6.3)
I don't know	20 (6.3)
Integration of traditional medicine/herbal medicine into conventional primary healthcare system	
Yes	300(94.9)
No	16(5.1)
Regulation of traditional medicine/herbal medicine in Nigeria	
Yes	301(95.3)
No	15(4.7)
Source of information about traditional medicine medicine/herbal medicine to treat malaria	
Doctors, Friends, Colleagues, Workmates	2(0.6)
Pharmacists	7(2.2)
Family members	168(53.2)
Herbalists	91(28.8)
Leaflets or other information provided by herbal medicine dealers	21(6.6)
Books/websites	27(8.6)
Others	0(0)

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DISCUSSION

The effort to document the malaria management practice of in the study area revealed that the people engaged in two major practices, namely; patronized orthodox drugs from chemist (44.3%) and engaged in self-medication with traditional (herbal) medicine (32.3%). The choice of orthodox antimalarial medicine over traditional remedies was observed to be relatively higher and this ascribed to the regular and persistence malaria control activities in the area and availability of common malaria medicine especially from nearby drug stores, a trend that was also recorded in southeast Nigeria by [20] who recorded that 25.0% of respondents in Ihiala Local Government Area of Anambra state, Nigeria bought antimalaria drugs out of prescription from nearby drug stores and 12.6% depended on traditional medicine to treat malaria. The observation that majority of the respondents obtained antimalarial drugs from available drug stores calls for commitment on the part of relevant authorities and agencies to monitor the provision and availability of genuine drugs in drug shops [21].

Self-medication using drugs bought from chemist were found to be a common practice (44.3%) amongst the respondents, and the usual pattern of treatment began at home with herbal remedies (32%) or drugs purchased from drug sellers (3.6%) which were administered inappropriately. This observation (44.3%) is lower than the 66.8% of respondents who opted for self-dedication in Ibadan, Oyo state as reported by [22] and the 83.7% reported by [23] in southeast Nigeria. It is only when home treatment is obviously not working that the patient is then taken to a health facility thereby resulting in delay and possible complications [24].

In this study, only 7.6% of respondents reported attending clinic/hospital while 6.6% visited herbalist. In previous studies conducted in Nigeria, similar results were recorded. [20] observed that only 24.6% of respondents in Ihiala Local Government Area, Anambra state attended clinic, [25] recorded that 27.3% of Ile-Ife residents attended hospital while [22] recorded that it is only 23.3% of respondents in Ibadan that visited the clinic to treat malaria. According to [26] [21], appropriate home management of malaria has some prospective gains. It increases the number of persons that have quick access to treatment, hence preventing adverse effects of delayed treatment. For this reason, some researchers encouraged the inclusion of improved self-medication and home treatment of malaria into malaria control program [27][28]. Hence, interventions to improve home management in the study area will be very beneficial and help reduce morbidity and mortality resulting from malaria.

The statistically insignificant ($P< 0.05$) preference for traditional healers (herbalists) (6.6%) for the management of malaria observed in this study was also noted in previous studies by [29] [30]. This observation suggested that they are not key service providers in the management of minor ailments. Therefore, the herbalists are not targets for intervention measures aimed at providing optimal care for cases of non-severe malaria in the study area. Additionally, the study established a relationship between the use of herbs and treatment of diseases as a significantly ($P>0.05$) percentage of respondents (85.4%) agreed to have used herbs to manage one form of disease or the other and have used herbs for at least the past six months, and 98.7% ($P>0.05$) used herbs to treat malaria bouts. This could be attributed to the availability of plants couple with the socio-economic challenges in Nigeria which have led many into looking unto cheaper and alternative means for succour. Many who cannot meet the expense of contemporary medical services depend on herbs to treat many diseases [31].

It has however been established in different studies that traditional medicine have genuine utility and efficacy against many diseases [7]. The high percentage (98.7%) of respondents that used herbs to treat malaria is contrary to the results obtained in Butajira District of Ethiopia by [32] in which less than 40% agreed to the use of herbs in management of malaria. The result recorded in present study is also higher than the figures reported in other parts of Nigeria by [20] [25] [23]. [20] recorded 12.0% usage of herbal medicine in treatment of malaria among the residents of Ihiala Local Government Area, Anambra State, [25] reported 13.4% among the residents of Ile Ife while [23] recorded 45% usage of traditional (herbal) medicine among the people of Ugwuogo-Nike, Southeast Nigeria.

In relation to the effectiveness of herbs used in the management of malaria attack, there is a common inclination to believe that herbal remedies are completely very effective as only 1(0.31%) of respondents perceived that herbal medicine is not effective. Majority of respondents 132(41.8%) reported that herbs are very effective against

malaria. This agreed with the results (56%) reported by [33] in a study in Kenya. It is however observed from the results that majority 189(59.8%) respondents used herbs when they have malaria attack while 81(25.6%) and when orthodox medicine cannot cure them. These suggest that herbal medicine were used more like a conventional doctor and so only at times of ill health and when orthodox medicine failed to cure the malaria episode. This result is similar to 43% recorded by [34] among the Chinese people who used traditional medicine only when they are sick. This dependence on herbs due to the failure of modern drugs indicates resistance of malaria parasites to these drugs. Drug-resistant malaria parasites have been reported by many authors including [32][33][35].

Sizeable percentage (78.2%) of respondents reported that traditional medicine is very cheap compared to 6.0% who perceived that it is very expensive. This result agreed with previous studies by [25] [36] who recorded that 80.8% of the residents of Ile Ife and 84% of the people of Kenya respectively perceived that herbs used in malaria treatment are very cheap. In the study area, 73.7% of respondents also perceived that traditional medicine very safe while 44.3% reported that there is no risk involved in the use of herbs to treat malaria, 15.8% of respondents are unsure of the risks of herbal medicines and minority (6.6%) reported that it is not safe at all. This result suggested that many people in the study area lack information on the chemistry of herbal formulation. There is however a common inclination to believe that herbal remedies are completely very harmless and are more helpful than dangerous. This could be due to the fact that herbs are natural and contained no synthesized chemical.

Majority of the respondents (94.9%) and (95.3%) wants herbal medicine to be regulated and integrated into the conventional primary health care system respectively. This result suggests that majority of the people actually viewed herbal medicine to be very effective but however wants the government to regulate its usage and integrate it into the primary healthcare system.

Regarding the sources of information about herbal medicine, more than 168(53%) of respondents reported getting information about the use of herbal medicine from family members suggesting that in Africa, information about herbal medicine is passed on from one generation to the other in families as a legacy [36] [31].

CONCLUSION

Although the study revealed a favourable perception to the use of herbal therapy for the treatment of malaria among the study population, there is need for deliberate community intervention programmes by government and stakeholders, directed towards improving health seeking practice and orientation to correct misconceptions about herbal therapy. Again, they should be educated on appropriate home management strategies for malaria with effective drugs given in correct dosages should since majority engages in self-treatment.

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